

Notice of Allowability

Application No.

10/743,540

Examiner

Elias B. Hiruy

Applicant(s)

SUNAGA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 9,13-21,23,26 and 30-38.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


DAVID MARTIN
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DETAILED ACTION

Response to Supplemental Amendment

1. The supplemental amendment and reply under 37 C.F.R. § received 10/19/05 is entered as applicant has amended the claims as suggested in the Final Office Action.
2. A PTO-892 form showing additional arts that were considered in this office action is attached as request by applicant.
3. Claim rejection of claims 11, 12, 28, and 29 is withdrawn as the claims are cancelled from further reconsideration.
4. Claim rejection of claims 14-21 is withdrawn in view of applicant amendment.
5. Claim rejection of claim 13, 18, and 19 is withdrawn in view of applicant discussion.
6. Claim 23 rejection is withdrawn as the claim is amended to overcome the rejection as set-forth in the final office action.
7. Rejection of claims 6-8, 10-12, 22, 24, 25, and 27-29 is withdrawn as the claims are cancelled from further consideration.

Allowable Subject Matter

8. Claims 9, 13-21, 23, 26, and 30-38 are allowed.
9. The following is an examiner's statement of reasons for allowance:
 - Taketomi et al teaches about an apparatus that meets most of the limitations of the claimed invention herein. Taketomi et al apparatus consists a control

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circuit/device, a drive circuit, and an electric motor. The driving circuit is configured as an H bridge.

- Satoh et al teaches about a motor controller that is configured to control a motor. The motor is configured to control the position of an air-mixing door.
- Regarding claim 9, 14, and 16, however, none of the prior arts alone or in combination showed or taught the specific methods that are found in independent claims 9, 14, and 16. The primary reason for allowance is the method employed by the drive control circuit along with:

"wherein said drive control circuit is communicatedly connected to a radio, and wherein said drive control circuit is configured to apply the driving pulse when said radio is turned on and is configured to apply the PWM signal when said radio is turned off."

- Regarding claim 13, however, none of the prior arts alone or in combination showed or taught the specific methods that are found in independent claim 13. The primary reason for allowance is the method employed by the drive control circuit along with:

"wherein, when stopping the electric motor, said drive control circuit is configured to apply the PWM signal to the switching semiconductor element constructing the lower arm of said H bridge circuit such that duty ratio of the PWM signal decreases based on a second predetermined rate, and wherein the first and second predetermined rates are substantially equal."

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to attached PTO-892 form for additional prior arts.

Remarks

11. Twenty-one claims are allowed.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias B. Hiruy whose telephone number is 571-272-6105. The examiner can normally be reached on 7AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EH

10/28/2005